

ABSTRACT OF THE DISCLOSURE

A dot mark forming method for obtaining a dot mark having a peculiar shape which is highly visible even if it is very small and accurately forming such a microdot is disclosed. The energy distribution of a laser beam emitted from a laser oscillator is homogenized by a beam homogenizer. A liquid crystal mask in which the maximum length of each of pixels which display a desired pattern is 50 to 2,000 μm is irradiated with the laser beam homogenized by the beam homogenizer. The energy density of a split laser beam which passed through the liquid crystal mask is set to 1.0 to 15.0 J/cm^2 , and the laser beam for each dot, which passed through the liquid crystal mask is condensed by a lens unit onto the surface of the article to be marked so that the maximum length of each dot becomes 1 to 15 μm . The single dot mark is formed on each laser irradiated point. The dot mark has a protrusion in the center which protrudes upward from the surface of the article to be marked. The length along the surface of the article is 1 to 15 μm and the height of the protrusion is 0.01 to 5 μm . Although the dot mark is very small, it is uniform and clearly seen. The degree of freedom increases with respect to the marking area and the marking timing.